

REMARKS

Claims 1-14 and 19-33 are pending in the application. Claims 15-18 and 34-37 have been canceled and Applicants reserve the right to re-introduce these claims in a later amendment and/or continuation application. Claims 9-10, 19, 24, and 27-28 are amended. The claim amendments made herein are not narrowing amendments, and no new matter is added. Claims 9, 19, and 27 have been amended for clarity and their scope remains unchanged. Claims 10, 24, and 28 have been amended to be independent of a rejected base claim and their scope also remains unchanged.

I. CLAIM REJECTIONS UNDER 35 U.S.C. § 102.

Claims 1 and 5 were rejected under 35 U.S.C. § 102(a) as being anticipated by admitted prior art disclosed by the applicant (Figures 1 and 2). Withdrawal of this rejection is respectfully requested for at least the following reasons.

The admitted prior art does not teach an automatic gain control means for determining a number of data elements generated per unit time having values within a first range and for adjusting the first gain when the determined number falls outside a second range, as recited in claim 1.

The admitted prior art discloses a non-data-aided RMS automatic gain control (AGC) device 54 that controls the gain of amplifier 32. (page 4, paragraph 9). However, the AGC 54 only adjusts its gain according to an RMS value of a data sequence output of an ADC. (page 6, paragraph 14). The prior art AGCs require calculation of the RMS value, which, in turn, requires an expensive digital multiplier. (page 13, paragraph 39). In contrast, claim 1 recites an automatic gain control means that determines a number of data elements generated per unit time having values within a first range, which is not taught by the admitted prior art. Additionally, claim 1 includes adjusting the first gain when the determined number falls outside a second range, which is also not taught by the admitted prior art. Thus, the automatic gain

control means of claim 1 adjusts the first gate according to whether a determined number of data elements generated per unit time falls within a range and not according to an RMS value. As a result, the automatic gain control means of claim 1 is not taught by the admitted prior art AGC 54. Claim 5 depends from claim 1 and is not anticipated by the admitted prior art for the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

II. CLAIM REJECTIONS UNDER 35 U.S.C. § 103.

Claims 2-4, 9, 13-14, 19-23, 27, and 31-33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art disclosed by the applicant (Figures 1 and 2) in view of Wu et al. (US Patent No. 6,870,891). Withdrawal of this rejection is respectfully requested for at least the following reasons.

Wu et al. fail to cure the deficiencies of the admitted prior art.

Applicants have shown that the admitted prior art fails to teach the automatic gain control means of claim 1 and hereby reiterates those arguments from above. Claims 2-4 depend from claim 1 and, as a result, are also not taught by the admitted prior art. Wu et al. fail to cure the deficiencies of the admitted prior art and, therefore, claims 2-4 are not taught by the admitted prior art and Wu et al., alone or in combination.

Wu et al. fail to teach a first means for generating a seventh data of value representing a number of second data elements within a succession of N data elements having values greater than a target value and a second means that increases the first gain when the value of the seventh data is less than a low threshold value and decreases the first gain when the value of the seventh data is greater than a high threshold value, as in claim 9.

Wu et al. count samples greater than a lower threshold voltage to obtain a low count value and samples greater than an upper threshold voltage to obtain a high count value. (Fig. 2). If the low count of samples greater than a lower threshold voltage is less than or equal to a minimum number, the gain is increased. (Column 4, lines 53-56). If the high count of samples greater than the upper threshold voltage is greater than a minimum number (Max_high), the gain is reduced. (Column 4, lines 56-59). Claim 9, in contrast, counts a number of values greater than a threshold value and increases the gain if the count is below a low threshold value and decreases the gain if the same count is greater than a high threshold value. ***Thus, claim 9 employs a single count to determine adjustment of the gain whereas Wu et al. requires both a low value count and a high value count to adjust the gain.*** Claims 13 and 14 depend from claim 9 and are also not taught by Wu et al. or the admitted prior art for the same reasons.

Claims 19 and 27 also contain language with respect to adjusting the first gain similar to that employed in claim 9. Thus, the above arguments are reiterated in support of claims 19 and 27. Additionally, claims 20-23 depend from claim 19 and claims 31-33 depend from claim 27, and, as a result, these claims are also not taught by Wu et al. Thus, Wu et al. and the admitted prior art fail to teach or suggest all of the claim limitations of claims 2-4, 9, 13-14, 19-23, 27, and 31-33, as shown above. Accordingly, withdrawal of this rejection is respectfully requested.

III. ALLOWABLE SUBJECT MATTER.

Claims 6-8, 10-12, 24-26 and 28-30 were objected to as being dependent upon a rejected base claim. Applicants have argued against the rejection of claim 1, from which claims 6-8 depend. Applicants have amended claims 10, 24, and 28 so that claims 10-12, 24-26 and 28-30 no longer depend from a rejected base claims. Withdrawal of this objection is respectfully requested.

IV. CONCLUSION

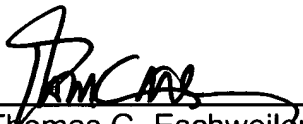
For at least the above reasons, pending claims currently under consideration are believed to be in condition for allowance and notice thereof is requested.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

In addition, should any fees be due as a result of the filing of this response, the Commissioner is hereby authorized to charge the Deposit Account Number 50-1733, INFNP118US.

Respectfully submitted,
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CERTIFICATE OF MAILING (37 CFR 1.8a)

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: October 14, 2005



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